

ACCESSION NR: AT4033999

S/0000/63/000/000/0145/0146

AUTHOR: Sukhorukov, B. I.; Kuz'menko, V. A.; Blyumenfel'd, L. A.

TITLE: Polycondensation of saccharides and formation of conjugated systems in the solid phase. I. Detection of paramagnetism in protonized saccharides

SOURCE: Geterotseptye vysokomolekulyarnyye soyedineniya (Heterochain macromolecular compounds); sbornik statey. Moscow, Izd-vo "Nauka," 1963, 145-146

TOPIC TAGS: polycondensation, saccharide, conjugated system, conjugated bond polymer, paramagnetism, protonized saccharide, electron paramagnetic resonance

ABSTRACT: The study is an extension of the authors' previous work in which riboside polycrystals were found to produce, at sufficiently low pH and temperatures, an electron paramagnetic resonance signal linked to the carbohydrate component of the system. The polycondensation of ribosides and saccharides carried out by the action of HCl in the solid phase, resulted in conjugated-bond polymers, not identified immediately, which produced an electron paramagnetic resonance signal in the form of a narrow symmetrical line with a free electron g-factor, a width of 6-8 oersteds between the points of the

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L21186-65 ENT(m)/EPT(c)/EMP(j) PC-L/Pr-L RM

ACCESSION NR: AP4047635

S/0192/64/006/005/0697/0701

AUTHOR: Sharoyan, E. G.; Tikhomirova, N. N.; Biyumenfel'd, L. A.

TITLE: The nature of the paramagnetic centers in molecular magnesium phthalocyanide crystals

SOURCE: Zhurnal strukturnoy khimii, v. 5, no. 5, 1964, 697-701

TOPIC TAGS: magnesium phthalocyanide, EPR signal, paramagnetic center, amorphous magnesium phthalocyanide, crystalline magnesium phthalocyanide

ABSTRACT: The nature of the EPR signals in magnesium phthalocyanide (MgPc) was studied. On repeated sublimation in vacuo of the amorphous and of the crystalline modifications of MgPc, a weak EPR signal corresponding to one unpaired electron per 10^5 molecules was discovered. The signal was apparently caused by the distribution of the charges on the defects of the solid material. The EPR signal intensity increased sharply in the amorphous modification at room temperature in the presence of oxygen; a similar signal intensity increase was noted for the crystalline modification at elevated temperatures. Oxygen diffusion and

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L 24186-65

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ACCESSION NR: AP4047635

and molecular complex formation was more difficult in the crystalline than in the amorphous MgPc. The rate of signal increase was limited by the rate of oxygen diffusion into the solid phase. The number of bonded oxygen molecules corresponded to the number of paramagnetic centers formed. It was believed the oxygen formed a molecular complex $PcMg^+O_2$ with the MgPc and did not react chemically with it. "We take the opportunity to thank V. T. Aleksanyan, M. Ya. Gen and A. N. Ponomarev for supplying suitable samples and conducting series of measurements." Orig. art. has: 3 figures

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics
AN SSSR)

SUBMITTED: 20Mar64

ENCL: 00

SUB CODE: EM, SS

NR REF SOV: 007

OTHER: 007

Card 2/2

ACCESSION NR: AP4034942

S/0181/64/006/005/1542/1544

AUTHORS: Benderskiy, V. A.; Blyumenfeld, L. A.; Shevchenko, I. B.; Al'tshuler, T. S.

TITLE: Electrical and magnetic properties of donor acceptor crystals

SOURCE: Fizika tverdogo tela, v. 6, no. 5, 1964, 1542-1544

TOPIC TAGS: electric property, magnetic property, donor acceptor crystal, organic semiconductor, aromatic amine, aromatic hydrocarbon, chloranil, bromanil

ABSTRACT: So many theories have been proposed for the generation of carriers in organic semiconductors that the authors sought to weigh the evidence and uncover the proper theory. They compared the activation energies of conduction with the position of the band of carrier displacement in weak donor-acceptor systems in both solid and liquid phases. They examined complexes of chloranil and bromanil with aromatic amines (o-aminophenol, n-bromanilid, and diphenylamine) and aromatic hydrocarbons (pyrene and stilbene). In all these complexes the absorption bands of the films proved to be identical to the spectra of the solutions. Change in the aggregate state did not lead to expansion of the band, and the shift in the band did not exceed 0.07 ev. For the hydrocarbons the band

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ACCESSION NR: AP4034942

shifted toward the red end of the spectrum, for the aromatic amines toward the short-wave end. All these facts indicate that the processes of optical excitation are identical in both liquid and solid phases. Measurements show that the activation energies and the maxima in the carrier-transfer band are identical. It thus appears that carriers are generated in these complexes in the same way as in one-component molecular crystals. Orig. art. has: 1 table and 2 formulas.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR, Moscow (Institute of Chemical Physics AN SSSR)

SUBMITTED: 18Nov63

DATE ACQ: 20May64

ENCL: 00

SUB CODE: SS,OC

NO REF SOV: 006

OTHER: 006

Card 2/2

CHETVERIKOV, A.G.; KALMANSON, A.E.; KHARITONENKOV, I.G.;
BLYUMENFEL'D, L.A.

Study of free radicals in biological objects generated
during the course of enzymatic reactions by the electron
paramagnetic resonance method. Biofizika 9 no. 1:18-24
'64. (MIRA 17:7)

1. Institut khimicheskoy fiziki AN SSSR, Moskva.

ACCESSION NR: AP4022481

S/0217/64/009/002/0172/0179

AUTHOR: Kharitonenkov, I. G.; Kalmanson, A. E.; Chetverikov, A. G.;
Blyumenfel'd, L. A.

TITLE: Vapor jet method of investigating the appearance and loss of
heptaquinone free radicals in model biological oxidation systems

SOURCE: Biofizika, v. 9, no. 2, 1964, 172-179

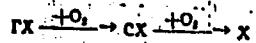
TOPIC TAGS: heptaquinone free radical, biological oxidation system,
oxidation-reduction reaction, ethylgallate, n-benzoquinone, vicasol,
methinone, rutin, quercetin, EPR spectroscopy, vapor jet EPR
spectroscopy, EPR spectrum hyperfine structure, sorbed state, soluble
state, free radical concentration, argon, oxygen, solvent vapor,
amplitude signal, heptaquinone molecule, electron transfer mechanism

ABSTRACT: Ethylgallate, n-benzoquinone, vicasol (a water-soluble
bisulfite vitamin K derivative), methinone (water insoluble vitamin K)
and flavones (rutin and quercetin) were investigated by EPR
spectroscopy to determine the nature of heptaquinone free radicals
formed during oxidation-reduction reactions in biological systems.

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ACCESSION NR: AP4022481

The substances were first analyzed by standard EPR spectroscopy methods and further analyzed by a vapor jet EPR spectroscopy method developed by the authors. The advantage of the vapor jet method is that free radicals adsorbed by different proteins can be studied over a wide range of time intervals and the ionization stage can be separated from the stage when free radicals appear. With this method the reaction of direct oxidation kinetics may be expressed as:



where RX - completely reduced (hydroquinone) form of investigated compound, CX - free radical (heptaquinone) form, and X - completely oxidized (quinone) form. For the vapor jet method, a solution of the investigated substance with 1 to 2% sodium alkoxide was placed on a paper filter in an inert gas atmosphere. Then the substance was dried with an argon jet or other gas jet and placed into an ampule for EPR spectroscopy. The absence of a hyperfine structure in the standard EPR spectra for substances analyzed in a sorbed state indicated that the radicals are rigidly bound to the base. EPR spectra for the same substances in a soluble state disclosed a hyperfine structure.

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ACCESSION NR: AP4022481

indicating the presence of highly mobile heptaquinone radicals. On the basis of these results, the effects of argon, oxygen, and nitrogen jets combined with various solvent vapors on heptaquinone free radical concentrations were investigated in the substances in varying sorbed and soluble states. Amplitude signals for the various effects are presented, but no conclusions are made. Experimental data shows that heptaquinone molecules sorbed on the polar bases can transfer an electron to one another if the medium has a sufficient number of protons capable of compensating for the charges that form. Possible mechanisms for this transfer are suggested. "The authors express their gratitude to their colleagues at the State Scientific-Research Institute of Vitaminology of the Ministry of Health USSR for the vicasol, methinone, rutin and querçetin preparations." Orig. art. has: 9 figures and 3 formulas.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR, Moskva (Institute of Chemical Physics AN SSSR)

SUBMITTED: 27Jun63 DATE ACQ: 13Apr64 ENCL: 00

SUB CODE: LS NR REF Sov: 003 OTHER: 003
Card 3/3

BERLIN, A.A.; BLYUMENFEL'D, L.A.

Possible mechanism of local activation effect. Izv.AN SSSR.Ser.khim.
No.9:1720-1721 S '64. (MIRA 17:10)

1. Institut khimicheskoy fiziki AN SSSR.

L 6715-65 EWT(m)/EPF(c)/EWP(j) Pg-4/Pr-4 RPL/AFWL/A5(mp)-2/RAEM(c)/SSD/
ASD(a)-5/RAEM(i)/ESD(gs)/ESD(t) WW/JFW/RM 69
ACCESSION NR: AP4042208 67
S/OC20/64/157/002/0381/0383

AUTHOR: Blyumenfel'd, L. A.; Gribanov, V. A.; Iyubchenko, L. S.; Chernyakovskiy, F. P.; Chetverikov, A. G.

TITLE: The appearance of paramagnetic centers and EMF during electrochemical reactions in polycrystals of triphenylmethane dyes 15

SOURCE: AN SSSR. Doklady*, v. 157, no. 2, 1964, 381-383

TOPIC TAGS: paramagnetic center, electromotive force, electrochemical reaction, triphenylmethane dye, polycrystal of triphenylmethane dye; electron magnetic resonance, electron paramagnetic resonance, Ohm's law, singlet, free radical, Curie law, triphenylmethane dye conductivity, solid triphenylmethane conductivity dependence

ABSTRACT: In continuation of earlier work which showed electron magnetic resonance (esr) signals in polycrystalline specimens of brilliant green subjected to artificial light, the authors describe some new electric and magnetic effects observed upon passing an electric current through pressed tablets of such specimens of the same and other dyes (see formulas I-VII). All tests were conducted

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L 6715-65

ACCESSION NR: AP4042208

2

with compound I and apply to the other dyes. Electrodes which did not influence electric and magnetic properties were inserted into the tablets. Positive deviations from Ohm's law were observed. With direct current, conductivity increased with time and voltage. It was 10^{-8} ohm $^{-1}$. cm $^{-1}$ at room temperature and 360 v/cm. The current passing through the tablet gave rise to potentials of the same sign (much like charging an accumulator) which reached e.g. 75 v with a 300 v current in a 0.15 cm thick tablet. A singlet epr (electron paramagnetic resonance) signal with g-factor appeared as the current passed through the tablet, indicating the appearance of free-radical/neutral compounds at the cathode. Its dynamics may be seen from Fig. 2 (encl.) Test showed the paramagnetic centers located close to the cathode. Increasing the temperature led to rapid disappearance of the signal upon discharge. Studies of this motion between 300 and 77 K showed that its intensity did not obey the Curie law; it coincided with the temperature dependency of the "narrow" epr light signal. Orig. art. has: 2 figures and 7 formulas.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Physical Chemistry, Academy of sciences, SSSR)

SUBMITTED: 24Feb64

ENCL: 02

Card 2/5

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205610018-8

L 6715-65
ACCESSION NR: AP4C12208

SUB CODE: GC,NP

NO REF Sov: 003

OTHER: 001

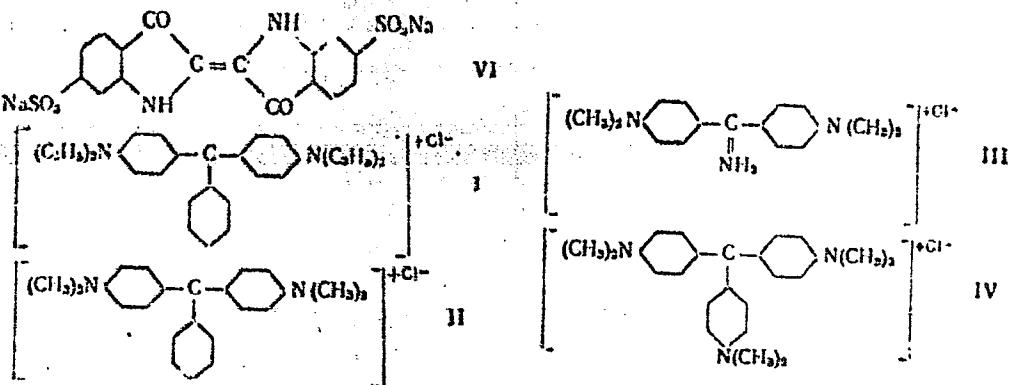
Card 3/5

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205610018-8"

L 6715-65
ACCESSION NR: AP4042208

ENCLOSURE: 01



Card 4/5

L 6715-65

ACCESSION NR: AP4042208

ENCLOSURE: 02

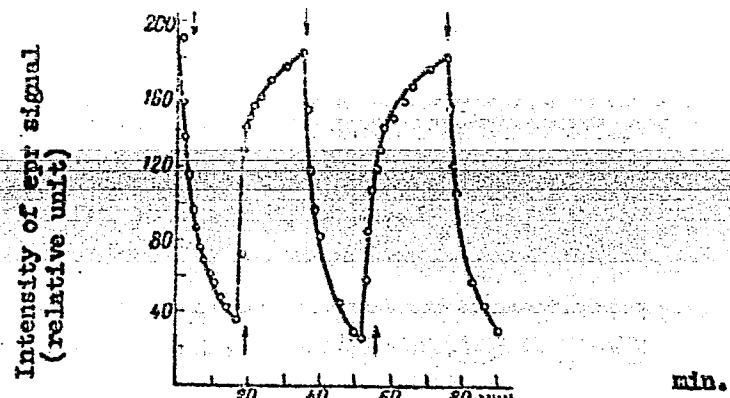


Fig. 2. Increase and decrease of intensity of the epr signal of a tablet of dye I in successive cycles of discharge and recharge. The arrows show the beginning of discharge (↓) and beginning of recharge (↑)

Card 5/5

FOMIN, G.V.; BLYUMENFEL'D, L.A.; SUKHORUKOV, B.I.

Electron-donor properties of the hydroxyl ion. Dokl. AN
SSSR 157 no.5:1199-1201 Ag '64. (MIRA 17:9)

1. Institut khimicheskoy fiziki AN SSSR. Predstavлено
академиком М.И. Кабачниковым.

KHARITONENKOV, I.G.; KAIMANSON, A.E.; CHETVERIKOV, A.G.; BLYUMENFEL'D, L.A.

Vapor-flow method in the study of the appearance and disappearance of
semiquinone free radicals in systems modeling biological oxidation.
Biofizika 9 no.2:172-179 '64. (MIRA 17:12)

1. Institut khimicheskoy fiziki AN SSSR, Moskva.

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| L-59341-63 SWI(1)/EPA(5)-2/EHT(m)/EWG(m)/EWP(j)/I/EWA(h) 17(c) DS/AT/JAJ/RM | | Pz-6/Pc-4/Pt-7/Pet |
| ACCESSION NR: | AP5016829 | UR/0364/65/001/006/0735/0738 621.315.592.547 |
| AUTHOR: | Chernyakovskiy, F. P.; Gribanov, V. A.; Chetverikov, A. G.; Blyumenfel'd, L. A. | |
| TITLE: | Electrochemical mechanism of charge transfer and generation of electromotive force in certain organic semiconductors | |
| SOURCE: | Elektrokhimiya, v. 1, no. 5, 1965, 735-738 | |
| TOPIC TAGS: | charge transfer, electromotive force, organic semiconductor, electrochemistry, polycrystalline complex | |
| ABSTRACT: The charge transfer phenomenon and the origin of the electromotive force were studied in polycrystalline complex organic semiconductors: <i>n</i> -phenylenediamine with tetrabromoquinone (I), <i>n</i> -phenylenediamine with tetrachloroquinone (II), benzidine tetrachloroquinone (III), and benzidine-I ₂ (IV). The complex were synthesized from acetonitrile, ethanol, bromobenzene, and water. After drying for a few hours of room temperature under 10 ⁻² mm Hg the complex materials were pressed ($4.5 \cdot 10^3$ kg/cm ²) into tablets 10 mm in diameter and 1 mm thick. Each tablet had a built-in | | |
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L 59541-65

ACCESSION NR: AP5016829

metal electrode. The tablets had an electrical conductance of the order of 10^{-9} ($\text{ohm} \cdot \text{cm}$) $^{-1}$. After passing a 10^{-5} to 10^{-7} amp current for a few minutes, electromotive forces of 30 to 35 volts were generated. For complexes I and II prepared from acetonitrile the electrical conductance and electromotive force are directly proportional to the tablet thickness. There is no continuous transfer of charge carriers between the electrodes through the complex material. In the 263° to 323°C range, the energy of activation of thermo-electrical force for complex I and II is 0.46 ± 0.01 electron volt and 0.38 ± 0.01 electron volt, respectively. When complex I and II tablets were exposed to vapor of acetonitrile or water and evacuated to 10^{-5} mm Hg, the mechanism of the charge transfer changed and the respective energies of activation dropped to 0.25 ± 0.01 electron volt and 0.018 ± 0.01 electron volt, respectively. Discontinuous change of the energy of activation indicates that the charge transfer mechanism is electrochemical. The electrochemical reaction during passage of electrical current involves reduction of quinones and oxidation of quinones. Both of them take place on the surface of the microcrystals of the complex material. The reverse reactions result in generation of electromotive force. Acetonitrile and water, condensed on the complex surface, facilitate the proton transfer reaction. Complex III and IV do not produce any electromotive force. Also, complexes I and II prepared from bromobenzene, ethanol, and water do not produce any electromotive

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L 59541-65

ACCESSION NR: AP5016829

force. Orig. art. has: 2 figures.

ASSOCIATION: Institut khimicheskoy fiziki akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences, SSSR)

SUBMITTED: 03Feb65

ENCL: 00

SUF CODE: 30

NO REF SOV: 003

OTHER: 000

llc
Card 3/3

CHETVERIKOV, A.G.; BLYUMENFEL'D, L.A.; FOMIN, G.V.

Possible mechanisms of the appearance and destruction of free
radical states in cells. Biofizika 10 no.3:476-486 '65.

(MIRA 18:11)

1. Institut khimicheskoy fiziki AN SSSR, Moskva. Submitted
Dec. 11, 1964.

SHAROVAN, E.G.; DUBROV, Yu.N.; TIKHOMIROVA, N.N.; BLYUMENFEL'D, L.A.

Study of the molecular complexes of magnesium phthalocyanine and other phthalocyanines with iodine by the electron paramagnetic resonance method. Teoret. i eksper. khim. 1 no.4:519-524
'65. (MIRA 18:10)

1. Institut khimicheskoy fiziki AN SSSR, Moskva.

L 1137-66 EWT(m)/EPR(c)/EWP(j)/T WW/RM

ACCESSION NR: AP5021680

UR/0193/65/008/004/0849/0851

AUTHOR: Gafurov, Kh. M.; Mulikov, V. F.; Gachkovskiy, V. F.; Parini, V. P.
Berlin, A. A. Blyumenfel'd, L. A.

TITLE: Effect of local paramagnetic centers on the optical and photoelectric properties of anthracene

SOURCE: Zhurnal strukturnoy khimii, v. 8, no. 4, 1965, 649-651

TOPIC TAGS: anthracene, paramagnetism, pyrolysis, optic property, photoelectric property

ABSTRACT: Soluble products of the pyrolysis of anthracene at 450C were subjected to thin layer chromatography on aluminum oxide and the fraction with a mean molecular weight of approximately 1000 was separated out. The intensity of the signal in the temperature interval from -15C to 25C obeyed Curie's law. The width of the symmetrical electron paramagnetic resonance line was about 8 oersteds. The elemental composition of the polymer fraction was: C = 92. 98%; H=5. 08%. The anthracene was purified by zone melting and was blended with the polymer fraction by mixing benzene solutions of both components. After holding for two days, the solution was chilled and the benzene was eliminated in vacuum.

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L 1137-66

ACCESSION NR: AP5021680

The samples were then evacuated for 8 hours at a vacuum of 10^{-6} mm Hg. The electron spectra of the samples, taken in chloroform, were a superposition of the spectra of anthracene and the fraction with paramagnetic centers. Measurements of the fluorescence spectra and of the time characteristics of the decay of the photocurrent indicate that both of these quantities are extremely sensitive to very small amounts of paramagnetic centers. The symbatic change of the yields of fluorescence and photocurrent with a change in the concentration of paramagnetic centers permits the assumption that these centers affect these characteristics by the same mechanism. Orig. art. has: 3 figures

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AN SSSR)

SUBMITTED: 15Feb65

ENCL: 00

SUB CODE: 00,000

NR REF Sov: 020

OTHER: 001

CH-873

RJUGE, E.E.; RLYUMENFEL'D, L.A.

Free radicals of ascorbic acid arising from the interaction with proteins. Biofizika 10 no.4:689-692 '65. (MIRA 18:8)

1. Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta.

L 61647-65 ENT(m)/EPF(c)/EMP(j)/T -Pc-h/Pr-h RM
ACCESSION NR: AP5015597

UR/0062/65/000/005/0932/0933
541.67+547.672

42

11

3

AUTHOR: Mulikov, V. F.; Gafurov, Kh. M.; Gachkovskiy, V. F.; Parini, V. P.;
Blyumenfel'd, L. A.; Berlin, A. A.

TITLE: Effect of paramagnetic centers on some of the physical properties of anthracene

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 5, 1965, 932-933

TOPIC TAGS: anthracene, paramagnetic resonance, electron spin resonance, fluorescence

paramagnetic centers

ABSTRACT: It has been shown earlier that the presence of local magnetic centers affects the chemical behavior of compounds with conjugated bonds, particularly their reactivity (effect of local activation). The authors found that the presence of magnetic centers also has a considerable effect on the physical properties of such compounds. The soluble paramagnetic fraction ($M_w \sim 1000$, ESR signal intensity 2.6×10^{18} spin/g) separated from the thermolysis products of anthracene was introduced into anthracene purified by zone melting. Samples of anthracene doped in this manner contained paramagnetic centers in concentrations of

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L 61647-55

ACCESSION NR: AP5015597

10^{10} - 10^{17} spin/g, which corresponds to one unpaired spin for 10^{11} - 10^7 anthracene molecules. In all samples, light-excited fluorescence and the kinetics of the photoconductivity drop were studied. The relationships obtained indicate that both effects are due to the same impurity centers. The character of these relationships changes in the range of paramagnetic center concentrations from 10^{11} - 5×10^{12} spin/g.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences, SSSR)

SUBMITTED: 15Feb65

ENCL: 00

SUB CODE: OC, N/P

NO REP SOV: 001

OTHER: 000

Card 2/1

L 05207-67 EWP(j)/EWT(m)/T RM
ACC NR: AP7000756

SOURCE CODE: UR/0192/66/007/003/0370/0379

BENDERSKIY, V. A., BLYUMENFEL'D, L. A., and POPOV, D. A., Institute of Chemical Physics, Academy of Sciences SSSR (Institut khimicheskoy fiziki AN SSSR)

Charge Transfer Conditions in Organic Systems. III. Conductivity Zone and the Excited Status of Molecules in Organic Semiconductors¹⁹

Moscow, Zhurnal Strukturnoy Khimii, Vol. 7, No 3, 1966, pp 370-379

Abstract: In organic semiconductors the relative position of the levels of the polar and nonpolar excitations can be arbitrary. It is shown that the levels of the former should lay close to the lower levels of excitation of the isolated molecule. The spectrum and wave functions of the polar states are found in the approximation of a strong bond for a uni-dimensional model. With a weak intramolecular interaction the lower levels of this branch corresponds to electron transfer between molecules with a definite relative distance, and with its increase the wave functions are diffused upon capturing several molecules and

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UDC: 541.67
0923 1730

L 05207-67

ACC NR: AP7000756

approaching the s-functions of the hydrogen atoms. The greater the intramolecular interactions and the lower the levels of the free carriers, the more the transfer is described as a hydrogen-like model at lower relative distances of the exciton. The probabilities of the optical transitions into the polar states are low and rapidly decrease with growth of their number so that they do not appear in the absorption spectrum. Orig. art. has: 1 figure, 2 formulas and 1 table. [JPRS: 37,177]

TOPIC TAGS: organic semiconductor, wave function

SUB CODE: 20 / SUBM DATE: 06Dec65 / ORIG REF: 010 / OTH REF: 016

Card 2/2 gl

ACC NR: AP7011815

SOURCE CODE: UR/0192/66/007/005/0686/0693

AUTHOR: Blyumenfel'd, L. A.; Benderskiy, V. A.; Stunzhaz, P. A..

ORG: Institute of Chemical Physics, Academy of Sciences USSR (Institut khimicheskoy fiziki AN SSSR)

TITLE: States with charge transfer in organic systems. 4. Paramagnetism and conductivity of organic semiconductors

SOURCE: Zhurnal strukturnoy khimii, v. 7, no. 5, 1966, 686-693

TOPIC TAGS: organic semiconductor, paramagnetism, semiconductor carrier, semiconductor conductivity, forbidden zone width

SUB CODE: 20

ABSTRACT: The relationship between concentration of unpaired electrons and free carriers in semiconductors with different widths of forbidden zone is examined. Organic semiconductors are classified by position of the level of polar states. For large forbidden zone widths, conductivity is intrinsic, and paramagnetism is related to the different kinds of structural perturbances that are differently related to carrier formation. When the zone width is reduced, the levels of polar states are also lowered, and for small zone widths paramagnetism and conductivity are related to thermal excitation of the molecules of the principal compound. In conductive ma-

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UDC: 537.311.33

175.2 2399

ACC NR: AP7011815

terials EPR signals are due to free carriers, and the energy of activation of conductivity is associated with the surmounting of internal barriers in the specimens. The regularities obtained have been experimentally confirmed for the example of the tetracene-water complex. Orig. art. has: 4 figures and 9 formulas. [JPRS: 40,351]

Card 2/2

U S S R .

10049* Mechanism of the Conversion of α -Naphthalene Sulfo Acid into β -Naphthalene Sulfo Acid. O mekhanizme prevara-schenija α -nafthalens'ulfozoty v β -nafthalens'ulfozotu. (Russian.) S. E. Shul'z, Ia. K. Syrkin, V. I. Likerson, and L. Y. Blumentfeld. Doklady Akademii Nauk SSSR, v. 101, no. 5, Apr. 21, 1955, p. 1075-1078.

Study methods include chromatographic analysis and use of radioactive tracers. Graph, table, 4 ref.

BLYUMENFEL'D, M.

Using the method of three unknowns in calculating unevenly heated rotating disks of variable thickness. Trudy KAI no. 77-5-23 '63.
(MIRA 17:10)

L-26459-65 EWT(1)/EWT(w)/EWT(m)/EWT(v)/EWT(k) PI-4 JD/EM
ACCESSION NR: AT5003071 9/2529/63/000/077/0505/0021 92
15
B+1

AUTHOR: Blyumenfel'd, M.

TITLE: Calculation of nonuniformly heated rotating disks of variable thickness by the method of three unknowns

SOURCE: Kazan. Aviatsionnyy institut. Trudy, no. 77, 1964. Stroitel'naya mekhanika, 5-23

TOPIC TAGS: metal toughness, metal deformation, differential equation, metal elasticity, recursion formula, metal bending, rotating disk

ABSTRACT: This article establishes the generalized recursion formula in three unknowns which conforms to nonuniformly heated rotating disks of variable thickness. The author commences by assuming that any two functions which depend on the integration constants are obtained by integrating one of the differential equations with constant coefficient. The generalized recursion formula obtained is then applied to nonuniformly heated disks of constant thickness. This recursion formula is used as many times as there are changes in the thickness of the disk. The circumferential stresses with respect to the internal radii of all the disk rings

Cord 1/2

L 26459-65
ACCESSION NR: AT5003071

are then calculated by using the recursion formula and the boundary conditions. Boundary conditions are then written for disks with and without a central hole, respectively, which supplement the system of equations obtained by using the recursion formula. The stresses in a rotating steel disk of variable thickness are then calculated. The disk was divided into 11 rings of constant thickness. A graph illustrates the straight-line relationship between the elasticity and the Poisson ratio as a function of temperature. Tables show all the dimensions of the disk and all the calculations necessary for recording the system of recursion formulas. The author concludes with a calculation of uniformly heated rotating disks of variable thickness. Orig. art. has: 9 figures, 48 formulas, and 4 tables.

ASSOCIATION: Kazanskiy aviationsionnyy institut (Kazan' aviation institute)

SUBMITTED: 10May63

ENCL: 00

SUB CODE: SP, SP

NO REF Sov: 003

OTHER: 002

Cord 2/2

ZHILKIN, V.B.; Prinimali uchastiye: ITEL'SON, G.M.; KALGANOV, D.K.;
KADOBNOV, V.D.; OLEYNIKOV, I.S.; SMIRNOV, V.I.; BLYUMENFEL'D,
M.K.; KONYASHIN, Ye.I.; LASKIN, R.L.

Experimental use of titanium in hydrometallurgy. Titan i ego
splavy no.8:273-278 '62. (MIRA 16:1)
(Hydrometallurgy—Equipment and supplies)
(Titanium—Corrosion)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205610018-8

BLYUMENFEL'D, N. I.

Blyumenfel'd, N. I. "Local hemotherapy in diseases of the cornea," Trudy Krymsk, med. in-ta im. Stalina, Vol. XII, 1948, p. 251-54

SO: U-3850, 16 June 53, (Letopsis 'Zhurnal 'nykh Statey, No. 5, 1949)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205610018-8"

BLYULENTEL'D, N. I.

Kuz'mina, L. T. and Blyumenfel'd, N. I. "Local hemotherapy during infections of the vascular tract," Trudy Krymsk, med. in-ta im. Stalina, Vol. XII, 1948, p. 255-57

SO: U-3850, 16 June 53, (Letopsis 'Zhurnal 'nykh Statey, No. 5, 1949)

BLYUMENFEL'D, N. I.

Rozina, M. A. and Blyumenfel'd, N. I. "Local hemotherapy for corneal complications of trachoma," Trudy Krymsk. med. in-ta im. Stalina, Vol. XII, 1948, p. 259-61

SO: U-3850, 16 June 53, (Letopsis 'Zhurnal 'nykh Statey, No. 5, 1949)

BLYUMENFEL'D, N. I.

Blyumenfel'd, N. I. -- "Eye injuries from firearms in children," Oftalmol. zhurnal, 1949, No 2, p 67-70

SO: u-5241, 17 December 1953, (Letonis 'zhurnal 'nykh Statey, No. 26, 1949).

BLYUMENFEL'D O.M.

CHISTOVICH, G.N.; *BLYUMENFEL'D, O.M., GORODEL'SKAYA, E.A., PETUKHOVA, R.N., POLOZOVA, T.V., TERENT'YEVA, T.A., SHILOVA, N.V., SHOSHICHA, S.V.*

Individual properties of staphylococcus cultures. Zhur.mikrobiol.
epid.i immun. no.7:101 Jl '54. (MIRA 7:9)

1. Iz kafedry mikrobiologii I Leningradskogo meditsinskogo instituta
im. Pavlova.
(STAPHYLOCOCCUS)

Abstract U-7920, 8 Mar 56

BLJUMENFEL'D, V.N., assist.

One probability problem and its application in the theory of
telephone communications. Sbor. nauch. trud. LETIIZHT no.5:183-188
'53. (MIRA 11:3)
(Probabilities) (Telephone lines--Construction)

BLYUMENVEL'D, V.N.

Uniqueness of limit distribution for a system of stochastic differential equations. Dokl.AN SSSR 111 no.4:739-741 D '56. (MLR 10:2)

1. Leningradskiy institut inzhenerov zhelezodorozhnogo transporta imeni V.N.Obratsova. Predstavлено akademikom S.N.Bernshteynom.
(Limit theorems (Probability theory))
(Differential equations)

BLUMENFELD, V.N.

SUBJECT USSR/MATHEMATICS/Theory of probability CARD 1/2 PG - 899
 AUTHOR BLUMENFELD V.N.
 TITLE On the uniqueness of the limit distribution for stochastic differential equations.
 PERIODICAL Doklady Akad.Nauk 111, 739-741 (1956)
reviewed 6/1957

For two stochastic equations

$$x_{i+1} = x_i + \Phi_1(x_i, y_i, t_i, \Delta t_i, \alpha_{t_i}) \sqrt{\Delta t_i}$$

$$y_{i+1} = y_i + \Phi_2(x_i, y_i, t_i, \Delta t_i, \alpha_{t_i}) \sqrt{\Delta t_i}$$

(Bernstein, Actual.Scient.Fonctions aléatoires, Paris 1, (1938)), the existence of the density of the limit distribution of the probabilities of X and Y can be proved under certain assumptions. Here the density $p(x, y, t)$ satisfies the second two-dimensional differential equation of Kolmogorov with the initial condition $p(x, y, 0) = p_0(x, y)$, where $p_0(x, y)$ is the common density of the distribution of the initial term (X_0, Y_0) .

Doklady Akad. Nauk 111, 739-741 (1956)

CARD 2/2

PG - 899

The author states that if the conditions for the existence of the mentioned equation of Kolmogorov are satisfied, then the following further conditions are sufficient for the uniqueness of a continuous solution which satisfies the initial condition:

- 1) for every fixed $t = t^0$, $p(x,y,t)$ must tend to zero at infinity.
- 2) in t , $p(x,y,t)$ must be uniformly continuous with respect to x and y .

The proof is shortly sketched and can be extended to the n-dimensional case.

INSTITUTION: Institute for Engineers of the Railroad Transport Organization,
Leningrad.

BLYUMENFEL'D, V.N.; LYUFUR, S.L.; LIVSHITS, B.S.; PARILOV, V.P.;
PSAREV, S.A.; RODZYANKO, V.Ye.; GOLUBTSOV, I.Ye., otv. red.;
KIRILLOV, L.M., red.; SLUTSKIN, A.A., tekhn. red.

[Methodology for designing the equipment of crossbar automatic telephone exchanges] Metodika rascheta oborudovaniia ATS koordinatykh sistem; informatsionnyi sbornik. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1961. 130 p. (MIRA 15:4)
(Telephone, Automatic—Equipment and supplies)

ELYUMENTAL', I.

Aleksandr Petrovich Shennikov; an obituary. Vest. LGU 17 no.21:156-
160 '62.
(SHENNIKOV, ALEKSANDR PETROVICH, 1883-1962)

1. BLUMENAL', I. KH., PETROVICHEVA, O. I.
 2. USSR (600)
 4. Botany - Ecology - Kazakhstan
 7. Geobotanical survey of the high-altitude sedge pastures of northwestern Kazakhstan.
Uch. zap. Len. un. no. 143, 1951.
9. Monthly List of Russian Accessions, Library of Congress, May 1953, Unclassified

BILYUMENTAL', I.Kh.; KIRIKOVA, L.A.

Collection of phytocoenotic descriptions in the Department of
Geobotany of Leningrad University. Vest. LGU 14 no.21:156-157
'59. (MIRA 12:10)

(Phytosociology)

BLYUMENTAL', I.Kh.

Monographic studies of alpine formations. Probl. bot. 5:11-17. '60.
(MIRA 13:10)

1. Kafedra geobotaniki Leningradskogo universiteta.
(Alpine flora)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205610018-8

BLYUMENTAL', I.Kh.

Aleksandr Petrovich Shennikov. Uch. zap. LGU no.290:3-12 '60.
(MIRA 13:9)
(Shennikov, Aleksandr Petrovich, 1888-)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205610018-8"

BILYUMENTAL', I.Kh.; KIRIKOVA, L.A.

Geobotanical description of the *Agropyrum pseudoagropyrum* (Trin.)
Franch. formation. Uch. zap. LGU no.290:42-125 '60. (MIRA 13:9)
(*Agropyron*) (Plant communities)

APANASHCHENKO, N.I.; KOSTYUKOVA, N.N.; RLYUMENTAL', K.B.; YEZHOOVA, G.G.

Toxigenic properties of freshly isolated diphtheria cultures.
Zhur.mikrobiol., epid. i immun. 42 no.9:36-42 S '65.

(MIRA 18:12)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN
SSSR. Submitted April 20, 1964.

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205610018-8

BLUMENTAL, K. V.

"Immunologic Reactions in Connection With the Clinical Course of Whooping Cough. Sub 15 Feb 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205610018-8"

BLYUMENTAL, K.V.

PREYFEL'D, Ye.I.; BLYUMENTAL', K.V.

Reticulogramulomatosis with amyloid liver cirrhosis. Pediatrria, Moskva
No.3:40-46 May-June 51. (CLML 21:4)

1. Of the Clinic of the Infectious Diseases Department (Head—Honored Worker in Science Prof. A.I. Dobrokhotova), Academy of Medical Sciences USSR, and of the Pathologico-Anatomic Division of the Children's Hospital imeni Rusakov (Prosector—Prof. Ye.I. Freyfel'd; Head Physician—Docent V.A. Krushkov), Moscow.

RAVICH-BIRGER, Ye.D.; BLYUMENTAL', K.V.; BORISOVA, L.V.; MAMONOVA, I.S.

Immunological indexes in children with various courses of convalescence following dysentery. Zhur.mikrobiol.epid.i immun. no.3:
49-54 Mr '55. (MLRA 8:7)

1. Iz Moskovskogo instituta epidemiologii, mikrobiologii i gигиены i pediatriceskoy kliniki Tsentral'nogo instituta usovershenstvovaniya vrachey.

(DYSENTERY, BACILLARY, immunology,
in convalescence in child.)

(CONVALESCENCE, in various diseases,
dysentery, bacillary, immunol. indices in child.)

SUKHAREVA, M.Ye., doktor meditsinskikh nauk.; BLYUMENTAL', K.V., kandidat meditsinskikh nauk.; SMIRNOVA, V.V.

Diagnosis of pharyngeal diphtheria according to materials from the S.P. Botkin Hospital. Pediatriia, no.5:36-41 S-0 '55. (MIRA 9:2)

1. Iz infektsionnogo otdeleniya kafedry pediatrii TSIU (zav. - kafedroy daystvit'nyy chlen AMN SSSR prof. G.N. Speranskiy) i Bol'nitsay imeni S.P. Botkina (glavnnyy vrach-prof. A.N. Shabanov, zav. infektsionnym otdeleniyem A.N. Buznikov)
(DIPHTHERIA, diag.
of pharyngeal)

YERMOL'YEVA, Z.V., professor.; SUKHAREVA, M.Ye. doktor meditsinskikh nauk.;
BLYUMENTAL', K.V., kandidat meditsinskikh nauk.; ISKARZHITSKAYA,
A.I.

Use of biomycin and streptomycin with ecmoline in experimental
and clinical diphthe ia for the purpose of controlling the
carrying of Corynebacterium diphtheriae. Pediatrīa, no.6:40-44
N-D '55.

(MIRA 9:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni N.F. Gamaleya
i infektsionnogo otdela kafedry pediatrii TSIU (zav.- deyatvitel'nyy
chlen AMN SSSR prof. G.N. Speranskiy) na baze bol'nitsy imeni S.P.
Botkina (glavnyy vrach-prof. A.N. Shabanov, zav. infektsionnymi
otdeleniyami A.N. Buznikov) 2. Chlen-korrespondent AMN SSSR.:for
Yermcl'yeva.

(CORYNEBACTERIUM DIPHTHERIAE, eff. of drugs on
biomycin, ecmoline & streptomycin)
(ANTIBIOTICS, eff.)

biomycin & ecmoline, eff. on Corynebacterium diphtheriae)
(STREPTOMYCIN, eff.
on Corynebacterium diphtheriae)

BLYUMENTAL', K.V. (Cand. of Med. Sci.); ISKRZHITSKAYA, A.I. (Cand. of Med. Sci.)

"Study of the Action of Biomycin in Combination With Ecmolin in Cases of Experimental Diphtheria Infection and in Control of Carriers of Diphtheria Bacteria Under Clinical Conditions,"

p. 350 Ministry of Health USSR Proceedings of the Second All-Union Conference on Antibiotics, 31 May 1957. p. 405, Moscow, Medgiz, 1957.

BLYUMENTAL, K.V.

SUKHAREVA, M.Ye.; CHUVALOVA, M.T.; BLYUMENTAL, K.V.

Rating some laboratory methods for diagnosing diphtheria. Lab.dele
3 no.3:44-47 My-Je '57. (MLR 10:9)

1. Iz infektsionnogo otdela kafedry pediatrii (zav. - prof. G.N. Speranskiy) TSentral'nogo instituta usovershenstvovaniya vrachey i laboratori (zav. - prof. Ye.A.Kost) Klinicheskoy ordena Lenina bol'ницы imeni S.P.Botkina.
(DIPHTHERIA)

BLYUMENTAL', K.V.; BRAYNINA, R.A.; VINNICHEK, N.D.; ISKRZHITSKAYA, A.I.

Results of polyclinical treatment of diphtherial carriers. Zhur. mikrobiol. epid. i immun. 28 no.12:56-60 D '57. (MIRA 11:4)

1. Iz TSentral'nogo instituta usovershenstvovaniya vrachey i Moskovskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.

(DIPHTHERIA, transmission,

carriago, control with tetracyclines (Rus)

(TETRACYCLINE, therapeutic use,

diphtheria carriage control (Rus)

USSR / Microbiology. Human and Animal Pathogens.
Corynebacteria.

F

Abs Jour: Ref Zhur-Biol., No 2, 1959, 5620.

Author : Blyumontal', K. V.; Khachiyan, G. A.

Inst : Not given.

Title : Significance of Determination of Toxicogenicity
of Diphtheria Bacilli by the in vitro Method
for the Diagnosis of Atypical Forms of Diph-
theria.

Orig Pub: Vopr. okhrany materinstva i detstva, 1958,
2, No 3, 27-33.

Abstract: No abstract.

Card 1/1

BLYUMENTAL', K.V.; KHACHIYAN, G.A.

Importance of in vitro determination of the toxigenicity of diphtheria bacilli in diagnosing atypical forms of diphtheria. Vop. okh. mat. i det. 3 no.3:27-33 My-Je '58. (MIRA 11:5)

1. Iz infektsionnogo otdela (zav.-prof. M.Ye. Sukhareva) kafedry pediatrii TSentral'nogo instituta usovershenstvovaniya vrachey (zav.-prof. G.N. Speranskiy) na baze bol'nitsy imeni I.V. Rusakova (glavnnyy vrach-zasluzhennyy vrach RSFSR dotsent V.A. Krushkov).
(BLYUMENTAL', K.V.) (KHACHIYAN, G.A.)

БЛЮМЕНТАЛ', К.В.

Antibiotics in the treatment of toxic diphtheria [with summary
in English], Pediatrja 36 no.2:9-13 F '58. (MIRA 11:3)

1. Iz infektsionnogo otdela (zav. - prof. M.Ye.Sukhareva) kafedry
pediatrii TSentral'nogo instituta usovershenstvovaniya vrachey
(zav. - deyastvital'nyy chlen AMN SSSR prof. G.N.Speranskiy) na
base bol'nitay imeni S.P.Botkina (glavnnyy vrach A.N.Shabanov)
(ANTIBIOTICS) (DIPHTHERIA)

ISKRZHITSKAYA, A.I.; BLYUMENTAL', K.V.

Use of antibiotics of the tetracycline series and of erythromycin
in experimental diphtheria and for diphthery carriers. Antibiotiki
4 no.4:59-62 Jl-Ag '59. (MIRA 12:11)

1. Kafedra mikrobiologii (zav. - chlen-korrespondent AMN SSSR
prof.Z.V.Yermol'yeva) i infektsionnyy otdel kafedry pediatrii
(zav. - prof.M.Ye.Sukhareva) TSentral'nogo instituta usovershen-
stvovaniya vrachey.

(TETRACYCLINE pharmacol)
(ERYTHROMYCIN pharmacol)
(DIPHTHERIA exper)

BLYUMENTAL¹, K.V.

Clinical aspects of influenzal croup in children. Vop. okh. mat.
1 det. 5 no.3:12-16 My-Je '60. (MIRA 13:7)

1. Iz infektsionnogo otdela (zav. - prof. M.Ye. Sukhareva)
kafedry pediatrii TSentral'nogo instituta usovershenstvovaniya
vrachey (zav. - deystvitel'nyy chlen AMN SSSR prof. G.N.
Speranskiy) i detskoy bol'nitsy imeni I.V. Rusakova (glavnyy
vrach - zasluzhennyy vrach RSFSR V.A. Krushkov)..
(GROUP)

CHERNYAVSKIY, G.A.; BLYUMENTAL', K.V.

Diagnostic errors in laryngeal diphtheria in children. Vest.
otorin. 22 no.4:81-84 Je-Ag '60. (MIRA 13:12)
(LARYNX--DISEASES)

ELYUMENTAL, K. V., BUKRINSKAYA, A. G.

"The role of para-influenza HA-2 virus in the etiology of pseudocroup
in Moscow."

Report submitted for the 1st Intl. Congress on Respiratory Diseases of
Virus and Rickettsial Origin. Prague, Czech. 23-27 MAY 1961

SUKHAREVA, M.Ye.; BLYUMENTAL', K.V.; FLEKSER, S.Ya.; TSIRLINA, F.G.

Characteristics of diphtheria during the period of its eradication as revealed by form the diphtheria department of Moscow. Vop. okh. mat. i det. 6 no. 2:6-11 F '61.

(MIRA 14:2)

1. Iz infektsionnogo otdela kafedry pediatrii TSentral'nogo instituta usovershenstvovaniya vrachey (zav. - deystvitel'nyy chlen AMN SSSR prof. G.N. Speranskiy) i detskoy bol'nitsy imeni I.V. Rusakova (glavnyy vrach zasluzhennyy vrach RSFSR dotsent V.A. Krushkov).

(DIPHTHERIA)

PASTERNAK, N.A.; BLYUMENTAL', K.V.

Significance of new methods of bacteriological study in the diagnosis
of diphtheria. Zhur.mikrobiol. epid. i immun. 32 no.4:28-33 Ap
'61. (MIRA 14:6)

1. Iz TSentral'nogo instituta usovershenstvovaniya vrachey.
(DIPHTHERIA)

BLYUMENTAL', K.V.; BUKRINSKAYA, A.G.

Group of parainfluenza etiology. Pediatriia no.2:43-48 '62,

(MIRA 15:3)

1. Iz infektsionnogo otdela (zav. - prof. M.Ye. Sukhareva) kafedry pediatrii TSentral'nogo instituta usovershenstvovaniya vrachey (zav. - deystvitel'nyy chlen AMN SSSR prof. G.N. Spexanskiy) na baze bol'nitsy imeni I.V. Rusakova i Instituta virusologii imeni D.I. Ivanovskogo AMN SSSR.

(GROUP) (INFLUENZA)

BLYUMENTAL, K.V.; BURKINSKAJA, A.G.

Croup of the parainfluenza etiology. Cesk. pediat. 17 no. 9:837-840
S '62.

1. Infekcni oddeleni pediatricke katedry UDL (v Rusakovove nemocnici),
vedouci akademik G.N. Speranskij a virologicky ustanov Ivanovskeho
akademie lekarskych ved SSSR.

(RESPIRATORY TRACT INFECTIONS) (PARAINFLUENZA VIRUSES)
(LARYNGITIS) (MYXOVIRUS INFECTIONS)

BUKRINSKAYA, A.G.; BLYUMENTAL', K.V.

Role of the para-influenza viruses in the etiology of pseudocroup.
Vop.virus. 7 no.5:567-572 S-0 '62. (MIRA 15:11)

1. Institut virusologii imeni D.I.Ivanovskogo AMN SSSR i
TSentral'nyy institut usovershenstvovaniya vrachey, Moskva.
(INFLUENZA--MICROBIOLOGY) (GROUP)

BLYUMENTAL', K.V.

Clinical characteristics of diphtheria in recent years.
Trudy TSIU 80:117-120 '65. (MIRA 18:11)

L 10977-66 EWT(1)/EWA(1)/EWA(b)-2 JK

ACC NR: AP5028392

SOURCE CODE: UR/0016/65/000/009/0036/0042

AUTHOR: Apanashchenko, N. I.; Kostyukova, N. N.; Blyumental', K. V.; Yezhova, G. G.

ORG: Institute of Epidemiology and Microbiology im. Gamaleya, AMN SSSR (Institut epidemiologii i mikrobiologii)

TITLE: Toxigenic properties of freshly isolated diphtheria cultures

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 9, 1965, 36-42

TOPIC TAGS: toxicology, microbiology

ABSTRACT: The main purpose of this investigation was to study the toxigenic properties and dynamics of toxin formation in freshly isolated diphtheria cultures by various methods and to make a comparative evaluation of these methods. The authors used 164 strains of diphtheria cultures isolated in and around Moscow in 1962-1963. The toxigenicity of the cultures was determined by agar precipitation, intracutaneous injection in guinea pigs, and by testing the potency of the toxin in filtrates of broth cultures. The authors establish that the most accurate method of determining the toxigenic properties of diphtheria cultures in vitro is the agar precipitation method since it is highly specific. However, even if it did not always permit eliciting toxigenic cultures that slowly produced small amounts of toxin, the flocculation test is less accurate and rather frequently when using this method it was impossible to detect the presence of toxin in the filtrate of broth cultures and to determine its strength. The toxigenic properties of the diphtheria cultures in vivo can be established more

Card 1/2

UDC:576.852.23.097.29

L 10977-66

ACC NR: AP5028392

accurately by determining the MLD of the filtrates of broth cultures. The intracutaneous method does not always reveal cultures that produced toxins of low strength and less accurately reflects fluctuations in the toxigenicity of individual strains. As a rule, highly toxicogenic cultures were elicited from diphtheria patients and those that were isolated from carriers varied considerably in degree of toxigenicity, from cultures that did not form toxin to highly toxicogenic ones. The dynamics of toxin formation differed in the investigated cultures: the maximum was reached in 24 and 48 hours and on the 5th day. Orig. art. has: 1 figure and 5 tables.

SUB CODE: 06 / SUBM DATE: 20Apr84 / ORIG REF: 015 / OTH REF: 007

Card 2/2

SOV/127-58-12-16/26

AUTHORS: Blyumakov, Yu., Mining Engineer and Gagen, A.F., Electrical Engineer

TITLE: A Recorder of Exploding Charges (Schetchik vzryvayemykh zaryadov)

PERIODICAL: Gornyy zhurnal, 1958, Nr 12, p 57 (USSR)

ABSTRACT: The authors constructed a recorder which automatically registers number of explosions occurring during the blasting operations. The principle of this recorder is based on the perception of the sound wave by a microphone, which through an electronic amplifier, transmits the impulses of this wave to an electronic counting grid connected to a counter. A detailed description, and the diagram of the recorder, is given. There is 1 schematic diagram.

Card 1/1

BLYUMENTAL', M.G.; VOLODIN, V.P.; LAPSHIN, V.V.; AKUTIN, M.S.

Effect of some technological factors of extrusion on the orientation
of sheet materials. Plast. massy no.8:23-26 '65. (MIRA 18:9)

5 (3)

AUTHORS: Dolgopol'skiy, I. M., Blyumental, M. Kh. Sov/79-29-8-12/81

TITLE: On the Complexes of Vinyl Acetylene With Cuprous Chloride in Hydrochloride Solutions

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2512 - 2517 (USSR)

ABSTRACT: In continuation of the papers of references 1 - 10 it was the purpose of the present paper to investigate the conditions of synthesis as well as the composition of the complexes which are formed from vinyl acetylene with CuCl in hydrochloride solutions. It was ascertained that crystalline complexes of different composition are formed in these solutions. Due to the formation of these compounds, a higher solubility of cuprous chloride in hydrochloric acid was observed in its reaction with vinyl acetylene. The composition of the complexes does not depend on the temperature but on the concentration of hydrochloric acid within the solution. The crystalline compounds, produced by applying 10% hydrochloric acid, on the average have a composition of 65.4% CuCl and 34.5% C_4H_4 , which corresponds to the formula $CuCl \cdot C_4H_4$; the compounds obtained with 20% hydrochloric

Card 1/2

On the Complexes of Vinyl Acetylene With Cuprous Chloride in Hydrochloride Solutions

SOV/79-29-8-12/81

acid have the composition of 79.2% CuCl and 20.8% C₄H₄, which corresponds to the formula (CuCl)₂·C₄H₄. By application of 15% hydrochloric acid a mixture from the two above complex compounds probably results. A considerable amount of vinyl acetylene remains in a complex-bound state and may be separated by desorption. Decomposition of the complex, under separation of vinyl acetylene and the therewith partially formed chloroprene results on saturation of the above solution with hydrochloric acid. It was ascertained that by the action of hydrogen chloride upon the crystalline complex compounds (CuCl)₂ · C₄H₄ and CuCl · C₄H₄ vinyl acetylene is partly replaced by HCl under formation of a crystalline complex of the composition (CuCl)₄ · C₄H₄ · HCl. A figure shows the special apparatus used for the synthesis of the complex compounds. More detailed data on the experiments are given in 3 tables. There are 1 figure, 3 tables, and 11 references, 4 of which are Soviet.

SUBMITTED: March 17, 1958
Card 2/2

DOLGOPOL'SKIY, I.M.; TRENKE, Yu.V.; ELYUMENTAL', M.Kh. ^{and 4ed}
^{p. 6 p. 6}

Synthesis and isomerization of 4-chloro-1,2-butadiene. Zhur,ob,khim.
33 no.4:1071-1074 Ap '63. (MIRA 1615)
(Butadiene) (Isomerization)

/ The therapy of subclinical anorexia and
✓ Bulimia and with their treatment.

1. The therapy of subclinical anorexia and
Bulimia and with their treatment.
2. The therapy of subclinical anorexia and
Bulimia and with their treatment.
3. The therapy of subclinical anorexia and
Bulimia and with their treatment.
4. The therapy of subclinical anorexia and
Bulimia and with their treatment.
5. The therapy of subclinical anorexia and
Bulimia and with their treatment.

BLYUMENTAL', R.M.; GIRICH, A.I.; GONCHARIK, A.K.; GUSEVA, T.P.; ZHITKOVA, L.A.; IOFFE, A.M.; KULISHIN, P.D.; LEVINA, L.I.; OSHKIN, P.A.; PAPROTSKIY, T.V.; RYAKHINOV, A.N.; SAMSONOV, N.A.; TULAYKOV, V.N.; USTINOV, I.M.; FAYN, B.P.; SHIFRIN, D.L.; KOLOTILOV, Vasiliy Ivanovich, red.; SVIATITSKAYA, E.P., vedushchiy red.; THOFIMOV, A.V., tekhn.red.

[Equipment for the petroleum industry] Neftianoe oborudovanie. Vol. 5 [Petroleum valves and fittings] Nefteianaia armatura. Moskva, Gos. nauchno-tekhn. isd-vo neft. i gorno-toplivnoi lit-ry. 1958. 247 p. (MIRA 12:1)

(Petroleum industry--Equipment and supplies)

BLYUMENTAL', R.M., mayor med. slushby

" Blood transfusion in the Far North. Voen. med. zhur. no.3:70 Mr '58.
(BLOOD TRANSFUSION) (MIRA 12:?)
in No. Russia (Rus))

BLYUMENTAL', R.M. (g.Korosten')

Instrument for suturing the palatine arches. Zhur. ush., nos. i
gorl.bol. 23. no.3:93 My-Je '63. (MIRA 16:7)
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